



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,645	10/03/2000	Da-Shan Shiu	PA000472	6060
23696	7590	12/10/2004	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			LIU, SHUWANG	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/678,645

Applicant(s)

SHIU ET AL.

Examiner

Shuwang Liu

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9,13,14,16,21,31,32,34 and 35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13,14,21,31,32,34 and 35 is/are allowed.
- 6) ☒ Claim(s) 9 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Furthermore, the allowable for claims 9 and 16 is withdrawn.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what "the start of each shortest time interval" refers to. "each shortest time interval" is refers to "time intervals" among the plurality of channels or a general reference time for the buffer partition.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Farrell et al. (US 5,24,541) (wherein "the star of each shortest time interval" is interpreted to be a reference time, for example, the time before transmission or transfer of data).

As shown in figures 1-8, Farrell et al. discloses:

(1) regarding claim 9:

A buffer structure (203) for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the buffer structure comprising:

a buffer (40, 41 in figure 2, 52 in figure 3, and 77 in figure 6) partitioned into a plurality of sections, one section for each channel, wherein the plurality of sections are assigned to the plurality of channels based on the associated time intervals (column line 32-column 54, column 19, lines 2-38, column 24, lines 23-31, and column 27, line 40-column 28, line 50); and

an address generator (figure 4) coupled to the buffer and operative to provide addresses for writing symbols to the assigned sections (column 14, line 55-61 and column 17, lines 36-42);

wherein the buffer is partitioned and assigned prior to the start of the transmission (column line 32-column 54, column 19, lines 2-38, column 24, lines 23-31, and column 27, line 40-column 28, line 50).

(2) regarding claim 16:

A buffer structure (203) for storing symbols received via a plurality of channels,

wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the buffer structure comprising:

a buffer (40, 41 in figure 2, 52 in figure 3, and 77 in figure 6) partitioned into a plurality of sections, one section for each channel, wherein the plurality of sections are assigned to the plurality of channels based on the associated time intervals (column line 32-column 54, column 19, lines 2-38, column 24, lines 23-31, and column 27, line 40-column 28, line 50); and

an address generator (figure 4) coupled to the buffer and operative to provide addresses for writing symbols to the assigned sections (column 14, line 55-61 and column 17, lines 36-42);

wherein the address generator is operative to maintain a write point for each assigned section (column 14, lines 55-61); and

wherein the address generator is further operative to main a start location for assigned section (column 14, lines 33-61).

***Allowable Subject Matter***

6. Claims 13, 14, 21, 31, 32, 34 and 35 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach and suggest a buffer structure for storing symbols

Art Unit: 2634

received via a plurality of channel including a first group of one or more channel and a second group of one or more channels as recited in claims.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is (571) 272-3036.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached at (571) 272-3056.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9306 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Art Unit: 2634

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read "Shuwang Liu". The signature is fluid and cursive, with the first name "Shuwang" and the last name "Liu" clearly distinguishable.

Shuwang Liu  
Primary Examiner  
Art Unit 2634

December 6, 2004